

# DEPARTMENT OF CONSUMER & INDUSTRY SERVICES DIRECTOR'S OFFICE CONSTRUCTION SAFETY STANDARDS

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(By authority conferred on the director of the department of consumer and industry services by sections 19 and 21 of Act No. 154 of the Public Acts of 1974, as amended, and Executive Reorganization Order No. 1996-2, being §§408.1019 and 408.1021 of the Michigan Compiled Laws)

R 408.42407 of the Michigan Administrative Code is effective as of the date of this amendment.

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### R 408.42401. Applicability.

**Rule 2401.** (1) This part applies to all of the following:

- (a) Portable tar kettles.
- (b) Tankers and yard storage units.
- (c) Material handling.

(2) This part does not apply to a unit that is used for paving operations if the unit has a vessel which has a capacity of less than 15 gallons or a burner that has a firing rate of less than 5,000 Btu's.

### R 408.42402. Tar kettle construction.

**Rule 2402.** (1) A tar kettle vat for molten material shall be of welded construction and all other materials of the tar kettle, except tires, used in its construction shall be noncombustible. A tanker for molten material shall be braced and baffled to contain the load.

(2) A safety factor of 2, which is the ratio of the breaking strength of a piece of material or object to the actual load or stress when in use, shall be applicable to all components and shall be maintained.

(3) A cover for a tar kettle vessel shall be hinged, close fitting and capable of smothering a fire inside the vessel, when in a closed position.

(4) A tar kettle shall be maintained level when containing molten material.

(5) A discharge valve from a tar kettle vessel shall be a quick closing type with standard pipe thread.

(6) Pipe, tubing, hose and conductors used for hot material from a tar kettle or tanker shall be supported when above ground or floor level. Hose, tubing, pipe and conductors running horizontally shall be supported at intervals that will prevent sagging. Connections shall be made with unions or couplings and shall be maintained free of leaks.

(7) A rotating or reciprocating part exposed to contact shall be guarded with an enclosure of 16 gauge sheet metal or expanded metal secured to the frame or kettle.

(8) Where a pump unit is mounted on a tar kettle and the fuel container is an integral part of the pump, the pump unit shall be shielded from the tar kettle by a barrier of rigid noncombustible material.

### R 408.42403. Loading and operating.

**Rule 2403.** (1) A tar kettle vessel shall be charged or loaded in a manner to avoid splashing. The weight of chunk material lifted manually shall be not more than 25 pounds.

(2) A vessel shall not be filled closer than 6 inches from the overflow level.

(3) A tar kettle or tanker shall have a qualified experienced operator in attendance at all times that the kettle or tanker is being fired. The operator shall not leave the ground area or be at a distance from the kettle or tanker that would prevent the operator's immediate attention.

### R 408.42404. Controls.

**Rule 2404.** (1) A tar kettle and tanker shall be equipped with a working temperature gauge.

(2) A yard storage unit shall have a safety pilot light with an audible alarm system and shall be thermostatically controlled.

(3) A yard storage unit or tanker purchased or constructed after August 9, 1974, shall have a level indicator to show the amount of the contents within the vessel.

### R 408.42405. Fuel.

**Rule 2405.** (1) The fuel for a tar kettle or pump motor shall be limited to natural gas, L.P. gas, fuel oil, kerosene or electricity, except gasoline may be used as fuel for a pump motor.

(2) Fittings, hose and piping shall be compatible with the fuel used.

(3) If a fuel tank is located less than 10 feet from a tar kettle or tanker, the fuel tank shall be shielded from the tar kettle or tanker by a barrier of rigid noncombustible material.

### R 408.42406. Fire precautions.

**Rule 2406.** (1) One or more portable fire extinguishers of the dry powder type having a total capacity of not less than 40 pounds shall be located not less than 10

feet nor more than 25 feet from a tar kettle being fired. An extinguisher less than 10 pounds shall not be provided.

(2) A tar kettle shall not be placed less than 20 feet from combustible materials unless separated by a fire resistant blanket.

(3) A tar kettle shall not be placed less than 10 feet from a structure that extends above the highest part of a kettle, piping excluded.

(4) A tar kettle shall not be placed in or upon a building except by permission of an authorized representative of the department.

(5) A tar kettle shall not be moved while being fired.

**R 408.42407. Material handling.**

**Rule 2407.** (1) A supply bucket used for handling hot material shall be of metal construction with all seams liquid tight. The pail handle shall be made of not less than ¼ inch steel with the handle hooked to hook ears riveted to the bucket. The handle ears shall be located above the center of balance.

(2) A leaking bucket shall be removed from service and repaired or scrapped.

(3) A supply bucket of hot material shall not be carried up a ladder.

(4) A manually powered hoist shall be equipped with manila rope not less than ¾ inch in size. The rope shall be inspected before the start of each job for broken fibers, burns, mildew and cuts. A rope having 1 of these conditions shall be replaced.

(5) The rope pulley shall be secured to the thrustout or hoisting jack in a manner to support not less than 3 times the weight to be lifted. The pulley groove shall be the same size as the rope.

(6) A cast or forged steel hook equipped with a safety latch shall be used to prevent a bucket from becoming unhooked when hoisting.

(7) Where a structural steel or wood beam thrustout is used, it shall be designed and installed in a manner to support not less than 3 times the weight being lifted and prevent tipping and twisting. A wood thrustout shall be set on edge.

(8) Where a counterweight is used, it shall be contained or secured in place to prevent slippage.

(9) Where a manual or powered hoisting jack is used, it shall be designed and installed in such a manner as to support not less than 3 times the load to be lifted.

(10) An employee shall not stand or walk under material being hoisted.

(11) A supply bucket shall not be filled closer than 2 inches from the top.

(12) When working on a roof deck or tending a tar kettle, tanker or yard storage unit, an employee shall wear a closed shirt covering the upper body including the arms and wrists, trousers that extend over the tops of the shoes and leather shoes not less than ankle high. This equipment shall be provided by the employee unless specifically otherwise provided for in a collective bargaining agreement or other employer-employee agreement.

(13) During roofing work, materials and equipment shall not be stored within 6 feet (1.8 m) of a roof edge, unless guardrails are erected at the roof edge.

(14) Materials that are piled, grouped, or stacked near a roof edge shall be stable and self-supporting.